Hydrological drought in the context of climatic changes in the world and in the Czech part of Elbe River basin

Abstract

The submitted thesis deals with the hydrological drought as one of extreme runoff situations in relation to climate change. Part of this work is a comprehensive research sources to Czech and foreign literature defining the concepts and the development of hydrological drought due to the physical-geographic and anthropogenic factors. Low flow characteristics and methods for defining the drought events are described. Attention is paid to the possibilities of prevention and compensation of negative impacts of drought. Within the second part the presence of low flow in Elbe River subbasins, Blšanka River, Rakovnický Brook and Vydra River, is analyzed. Water deficit is evaluated with regard to the physical-geographic characteristics and the specifics of water resources use. Outline of possibilities to increase the retention capacity of study catchments is given.

Key words: hydrological drought, low flow, runoff regime, retention potential, Blšanka River, Rakovnický Brook, Vydra River